UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,776	03/29/2001	Ylian Saint-Hilaire	10559/424001/P10438	5520

20985 7590 10/05/2005

FISH & RICHARDSON, PC
12390 EL CAMINO REAL
SAN DIEGO, CA 92130-2081

EXAMINER	
SCHEIBEL, ROBERT C	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,776	SAINT-HILAIRE ET AL.	
	Examiner	Art Unit	
	Robert C. Scheibel	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-3,5-11,13-16,23,24,26,27 and 32-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3, 5-11, 13-16, 23-24, 26-27, and 32-36 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 6/20/2005 is acknowledged.
- Claims 1, 9, and 23 have been amended.
- New claims 32-36 have been added.
- Claims 1-3, 5-11, 13-16, 23-24, 26-27, and 32-36 are pending.

Response to Arguments

1. Applicant's arguments, see page 10, filed 6/20/2005, with respect to the objection to claim 9 have been fully considered and are persuasive. The objection to claim 9 has been withdrawn.

2. Applicant's arguments, see page 10, filed 6/20/2005, with respect to claims 1-3, 5-11, 13-16, 23-24, and 26-27 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims **1-3, 5-11, 13-16, 23-24, 26-27, and 32-36** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,137,802 to Jones et al in view of U.S. Patent 6,389,005 to Cruickshank.

Regarding claims **1, 9, and 23**, Jones discloses the limitation of automatically determining one of a plurality of interfaces (the wired interface (46 of Figure 3, 52 of Figure 4) and the wireless interface (48 of Figure 3, 56 of Figure 4)) to use between a mobile device (one of user devices 16, 18, 20, 22, 24, and 26) and a destination. Jones discloses the limitation of operating using a selected interface in the transitions to states 1,2, or 4 (as appropriate) in figure 9. Jones also discloses the limitation of altering a record of information transmitted across a network from a mobile unit to a destination based on an acknowledgment by the destination of receipt of the transmitted information in the network layer 42 of Figure 2. In the passage from line 65 of column 3 through line 14 of column 4, Jones clearly suggests the use of TCP at the network layer. The TCP protocol is well known in the art to maintain a record of what data has been transmitted (as well as what subset of that transmitted has been acknowledged by the receiver). Thus, Jones inherently discloses this limitation through the use of TCP. Note that claim 23 also has the limitations of maintaining a count of information transmitted from a mobile unit to a home network, receiving at the mobile unit an acknowledgement of received information, and altering the count based on the acknowledgement, all of which are clearly similarly disclosed by Jones in the use of TCP as the network layer. Jones discloses the

limitation of automatically determining if a more preferable interface should be opened, and if so seamlessly changing to the more preferable interface by closing a current interface, and establishing the new interface connection in Figures 3 and 10. Lines 63-65 of column 4 clearly disclose the limitation that the selection of interfaces is automatic. If switching from wireless to wired (or vice versa), the selected interface is opened (step 704 of Figure 10) and the current interface is closed (steps 1003 or 1004 of Figure 10). Note that Jones clearly discloses this changing of interfaces as being seamless in lines 26-28 of column 6. As indicated above, Jones suggests the use of TCP as a network layer and thus also inherently discloses the limitation of transmitting information from the mobile unit to the destination based on the record after the mobile unit establishes a new interface connection to the destination starting with information immediately adjacent to information most recently transmitted to the destination. It is well known that TCP maintains information about what data has been transmitted and that the information is transmitted sequentially with the exception of an acknowledgement timeout. Since the interface change is clearly "seamless" as indicated by Jones throughout (see lines 26-28 of column 6, for example), the behavior of the network layer will continue transparently even when the interfaces are changed. This will result in transmitting information immediately adjacent to the most recently transmitted information. This limitation differs slightly in claim 23 in that the information is transmitted by the mobile unit starting with information immediately adjacent to the received information. This is also clearly anticipated by the use of TCP at the network layer. As is well known, TCP provides reliable communications by retransmitting data when it is lost. In Jones, if data is lost (on the wireless interface, for example) prior to the interface switch, TCP will recognize this and transmit the data immediately adjacent to the last

received (and acknowledged) information when the acknowledgement timer corresponding to the lost data expires, which is likely to happen after the interface switch.

Jones does not disclose expressly the limitation of at least 3 interfaces. Further, although Jones clearly indicates considering user preference in determining the interface to use (see user preference decision block 904 of Figure 9), Jones does not disclose expressly the limitation that a list of interfaces from most to least preferable is used (since only the most preferable interface of the two need be indicated).

Cruickshank discloses the limitation of at least three interfaces in Figure 1. Cruickshank also discloses the limitation of automatically determining using a list of interfaces ranked from most preferable to least preferable, and selecting a most preferable available interface on the list in Figure 3A. While the list is not explicitly drawn in this figure, it is clear that the order in which the interfaces is checked (WAN, Internet, PSTN) lists the order of preference of these interfaces; if the WAN interface is available, it will be used, regardless of the availability of the other interfaces.

Jones and Cruickshank are analogous art because they are from the same field of endeavor of selecting among various available communications interfaces. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Jones to select among the interfaces of Cruickshank when using the wired interface. The motivation for doing so would have been to reduce costs to the user as indicated in the abstract of Cruickshank. Therefore, it would have been obvious to combine Cruickshank with Jones for the benefit of reducing user costs to obtain the invention as specified in claim 1, 9, and 23.

Regarding claims **2 and 10**, Jones discloses the limitation that the record includes an amount of information transmitted from the mobile unit to the destination in the suggestion of using TCP at the network layer discussed above.

Regarding claims **3, 11, and 27,** Jones discloses the limitation of the acknowledgment including an amount of the received information in the use of TCP at the network layer; the acknowledgment number field in a TCP segment anticipates this limitation.

Regarding claims **5 and 13**, the limitation that the information is transmitted by the mobile unit starting with information immediately adjacent to the received information is also clearly anticipated by the use of TCP at the network layer. As is well known, TCP provides reliable communications by retransmitting data when it is lost. In Jones, if data is lost (on the wireless interface, for example) prior to the interface switch, TCP will recognize this and transmit the data immediately adjacent to the last received (and acknowledged) information when the acknowledgement timer corresponding to the lost data expires, which is likely to happen after the interface switch.

Regarding claims **6 and 14**, the limitation of removing received information from the record is well known in the use of TCP. If this is not done, the size of the transmit buffer in the transmitting device (mobile unit) limits the total amount of data that can be transmitted in a given session. This is not conducive to the transmission of large amounts of data as is often done using TCP.

Regarding claims **7, 15, and 26**, Jones discloses the limitation that the new interface includes a reliable link in the use of TCP at the network layer. TCP is well known to provide

reliable transport for application data and thus each interface provides a reliable link through its network layer.

Regarding claim **24**, Jones discloses the limitation of transmitting information starting with information immediately adjacent to the information at the end of the count information in the use of TCP at the network layer. It is well known that TCP maintains information about what data has been transmitted and that the information is transmitted sequentially with the exception of an acknowledgement timeout. Since the interface change is clearly "seamless" as indicated by Jones throughout (see lines 26-28 of column 6, for example), the behavior of the network layer will continue transparently even when the interfaces are changed. This will result in transmitting information immediately adjacent to the most recently transmitted information.

Regarding claims **8 and 16**, Jones discloses the limitation of the destination including a home network associated with the mobile unit in lines 18-24 of column 1; the wired company network is the home network.

Regarding claims **32-36**, the combination of Jones and Cruickshank described above discloses all the limitations of these claims. Specifically, Figure 3B of Cruickshank discloses monitoring the QoS of the Internet interface and effectively making the interface unavailable when the QoS is below a threshold. This clearly discloses the limitations of claims 32 and 34 of adding an available interface (claim 32) and removing an unavailable interface (claim 34). The Internet interface is effectively removed from the set of available interfaces when the QoS is below a threshold and effectively added when the QoS is back above the threshold. The limitation of claims 33 and 35 of determining the availability of an interface based on a factor chosen from the group of factors listed in this claim is disclosed in lines 34-36 of column 2.

Finally, the limitation of periodically ranking the interfaces from most to least preferable is also disclosed in Figure 3B; changing the availability of an interface clearly changes the ranking of the interfaces.

Conclusion

6. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RCS 9-29-05

Robert C. Scheibel
Examiner
Art Unit 2666

DANG TON
PRIMARY EXAMINER